
**REGULATORY EVALUATION,
REGULATORY FLEXIBILITY ANALYSIS,
TRADE IMPACT ASSESSMENT, AND UNFUNDED
MANDATES ACT DETERMINATION**

FOR

FINAL RULE:

**FLIGHTDECK SECURITY ON LARGE CARGO
AIRPLANES**

OFFICE OF AVIATION POLICY AND PLANS
AIRCRAFT REGULATORY ANALYSIS BRANCH, APO-320

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EXECUTIVE SUMMARY

The rule will allow an air cargo operator to substitute a Transport Security Administration (TSA) approved security program in place of retrofitting a Phase 2 flightdeck security door to meet the security requirements in parts 121 and 129. The FAA determined that such a security program will provide an equivalent or greater level of safety than would be provided by a Phase 2 flightdeck security door.

The FAA estimates that 26 air cargo operators have 540 airplanes with flightdeck doors (out of a total of 1,257 air cargo airplanes). Depending upon the size of the air cargo operator, it will cost between \$20,000 and \$250,000 to initially develop and implement a personnel security program that must be approved by the TSA. It will cost between \$10,000 and \$120,000 annually to operate the program. These costs do not include costs to screen the air cargo packages. The total cost of these programs will be \$12.3 million (\$9.2 million discounted) over the next 10 years. To the extent that some air cargo operators have voluntarily developed personnel security programs, the costs have been underestimated because these operators have already made the expenditure.

The costs to retrofit flightdeck security doors have been underestimated by the FAA. Recent data indicates that it will cost a total of between \$55,000 and \$320,000, depending upon the airplane model, to retrofit a flightdeck security door. These costs include the cost of the door (\$42,000 to \$210,000), the labor time (72 to 192 hours), and the lost net revenue from out-of-service time (2 days to 4 days). The total air cargo airplane flightdeck door retrofit would

cost \$66.5 million (to be spent before April 9, 2003). During the next 10 years, the increased maintenance of the electronic systems associated with these doors would cost about \$4.4 million (\$3.0 million discounted) and the increased fuel consumption due to the increased weight of these doors would be about \$9.5 million (\$7.7 million discounted). Thus, the total cost from retrofitting these doors would be \$80.4 million (\$76.2 million discounted). To the extent that some air cargo operators have voluntarily developed personnel security programs, the cost savings have been underestimated.

Consequently, the FAA anticipates that the air cargo industry could save about \$68.1 million during the next 10 years (\$67.0 million discounted) if all air cargo operators employ a TSA-approved security program in lieu of retrofitting Phase 2 flightdeck security doors. More importantly, they could save \$64.7 million between now and April 9, 2003.

There will be no international trade impact because this rule applies to both U.S. and foreign air cargo carriers.

I. INTRODUCTION

On January 15, 2002, parts 25 and 121 were amended to incorporate new standards for U.S.-registered transport category airplane flightdeck doors to require them to resist forcible intrusion and ballistic penetration by April 9, 2003. A similar amendment was issued for foreign transport category airplanes on June 21, 2002. The affected airplanes included air cargo airplanes.

On passenger airplanes, there are operating rules that require a door between the flightdeck and the passenger compartment. There are no rules that require air cargo airplanes to have a flightdeck door. Some air cargo airplanes have flightdeck doors while most do not.

Generally speaking, an air cargo airplane transports few riders other than that operator's flight crews (and, occasionally, members of their families) and other employees being ferried to another destination. In addition, air cargo airplanes transport dangerous cargo and animals that require non-operator personnel on the airplane to ensure the airplane's safety. As a result, unlike a commercial passenger air carrier operation, the air cargo operator knows and controls who rides on the airplane.

When the flightdeck door requirements were amended in 2002, several air cargo operators petitioned to be exempted from them. In response, the FAA re-evaluated the flightdeck door requirements for air cargo operations and determined that establishing security programs rather than installing expensive flightdeck security doors would better serve

the security of those airplanes. In other words, the FAA determined that keeping terrorists off air cargo airplanes provides a higher level of security for air cargo airplanes than the security provided under the amended rule.

II. COSTS OF COMPLIANCE

II.A. Introduction

It will cost an air cargo operator to develop and establish a security program for the people who travel on its airplanes. For most air cargo operators, however, these security program costs will be more than offset by cost savings from not retrofitting Phase 2 flightdeck security doors. This chapter provides estimates of the relative cost of each option for the years 2003 through 2013 in order to adequately include the annual costs associated with each option in future years.

Although the final rule affects both U.S. and foreign air cargo operators, the FAA is mandated to evaluate the economic impact only on U.S. operators. As a result, this FAA analysis does not quantify the final rule's potential costs or cost savings to foreign air cargo carriers.

The costs to the air cargo industry of establishing a security program depend upon two factors. The first factor is the number of cargo airplanes with flightdeck doors that also occasionally transport people. The second factor is the size of the air cargo operation.

II.B. Profile of the Affected Air Cargo Industry

There are 46 U.S. air cargo operators with 1,080 turbojet cargo airplanes operating under part 121. Brokers and leasing companies currently hold 125 turbojet cargo airplanes. As these 125 airplanes

are being held in expectation of being leased, the FAA estimates that 1,205 turbojet cargo airplanes could be affected by this rule.^{1 2} In addition, Back Associates data indicates that 3 U.S. air cargo operators operate 52 large turboprop cargo airplanes under Part 121. As a result, the FAA determined that a total of 1,257 cargo airplanes could be affected by this rule.

An October 2002 airline flightdeck door security compliance survey of 30 U.S. air cargo operators reported that 358 out of 840 cargo airplanes had Phase 1 compliant doors. From Back Associates data, the FAA determined that 42 of these 840 airplanes are turboprops. The FAA determined that none of these 42 turboprop cargo airplanes has a flightdeck door. Thus, 358 of those 798 airplanes (44.9 percent) and none of the air cargo turboprops have a flightdeck door. This survey of 30 air cargo operators does not include all air cargo operators, nor does it include all of the respondent's airplanes. Although it is probable that the survey respondents have a higher percentage of cargo airplanes with doors, the FAA assumed that this sample is representative of the entire air cargo industry. Therefore, as shown in Table II-1, using 44.9 as the percentage of turbojet cargo airplanes that have a door, the FAA calculated that 540 turbojet airplanes in the U.S. fleet have Phase 1 doors.

TABLE II-1

¹ World Jet Inventory Year-End 2001, Summary of Freighters by Owner/Operator Category, Total U.S., Section 2, Table 21, p.30, and Jet Inventory by Region Section 6 Table 1, pp. 100-103, March 2002.

² The World Jet Inventory actually lists 1,315 of these air cargo airplanes. However, this analysis excludes all B-707, L-1011, and F-28 airplanes (a total of 10 airplanes) because it is unlikely that a Phase 2 flightdeck security door will be developed for those models.

ESTIMATED NUMBERS OF CARGO AIRPLANES WITH FLIGHTDECK DOORS BY AIRPLANE MODEL

AIRPLANE MODEL	TOTAL NUMBERS	NUMBERS WITH DOORS
727	385	172
737	5	2
747/100/200/300	100	45
747/400	16	7
757	75	34
767	53	24
SUB-TOTAL	634	284
DC-10	88	40
DC-8	188	85
DC-9	99	43
MD-10/11	56	25
SUB-TOTAL	431	193
A-300	39	17
A-300-600	56	26
A-310	45	20
SUB-TOTAL	140	63
GRAND TOTAL	1,205	540

The survey also reported that 17 of the 30 air cargo operators (56.7 percent) have at least one airplane with a flightdeck door. Assuming that the 56.7 percentage is representative of the entire industry, the FAA calculated that 26 of the 46 air cargo operators have an airplane with a flightdeck door. The FAA also determined that of these 26 air cargo operators, 3 are likely to be large operators (more than 50 airplanes), 9 are likely to be medium sized operators (between 10 and 50 airplanes), and 14 are likely to be small operators (fewer than 10 airplanes).

II.C. Cost of a Security Program for an Air Cargo Operator

There are two difficulties in estimating the potential cost of a TSA-approved security program. The first difficulty is that an air cargo security program could cost significantly less than estimated if an air cargo operator does not transport any people other than its own employees. In order to avoid underestimating the potential total cost of an air cargo airline security program, the FAA assumed that every affected air cargo operator will occasionally transport people other than its employees.

The second difficulty is that the TSA has not finalized its air cargo security program requirements. Consequently, the FAA estimated these potential costs based on the program that the FAA believes the TSA would require for only a personnel screening security program. The security program envisioned by this rule only covers people. It does not include cargo screening. Thus, the FAA did not estimate the potential costs of screening air cargo packages under these security programs.

In establishing a personnel security program, an air cargo carrier will incur such costs as reviewing employee employment files, performing employee background checks, developing procedures to perform security clearances on non-employee passengers, and applying to the TSA for program approval. The FAA estimated that the initial (first year) cost to establish such a security program will average about \$250,000 for a large air cargo airline, about \$75,000 for a medium sized air cargo airline, and about \$20,000 for a small air cargo airline. Thus, if all 26 affected air cargo carriers chose to establish security programs, the FAA calculated that the first-year cost will be about \$750,000 for the 3 large air cargo airlines, about \$675,000 for the 9 medium sized

air cargo airlines, and about \$280,000 for the 14 small air cargo airlines, for a total first-year cost of about \$1.705 million.

The FAA also used historical data to estimate that an average of 4 new small air cargo airlines will enter the industry every year. Assuming that 56 percent of those 4 new operators (2 operators) will employ cargo airplanes with flightdeck doors, the FAA estimates that there will be an annual average cost of about \$40,000 to establish security programs for them. Offsetting those new air cargo operators, the FAA determined that 4 small air cargo airlines will annually leave the industry. Consequently, the total number of air cargo carriers operating security programs will remain constant, even though 2 new programs are established every year.

However, several air cargo operators have voluntarily developed personnel security programs that include some or most of the activities envisioned by the FAA in its cost estimates. Thus, those air cargo operators have already made many of these expenditures and their estimated costs will be lower than projected by the FAA. Nevertheless, in order to ensure that the total costs of these security programs are not underestimated, the FAA assumed that no air cargo operator has such a program.

Thus, as shown in Table II-2, the total costs of establishing these security programs between 2003 and 2013 will be \$2.065 million, which has a present value of \$1.965 million, using the 7 percent discount rate required by the Office of Management and Budget for government agencies.

In operating a personnel security program, an air cargo carrier will incur such costs as keeping its employee employment files current, performing follow-up background checks, obtaining security clearances on non-employee passengers, and cooperating with TSA reviews and audits. The FAA estimated that it will require an average of 3 full-time employees at a large air cargo airline, 1 full-time employee at a medium sized air cargo carrier, and one-quarter of an employee's time at a small air cargo airline to perform these security functions. At an average salary and fringe benefits cost of \$40,000 per ground employee, the annual operating cost of a security program will be about \$120,000 at a large air cargo airline, about \$40,000 at a medium sized air cargo airline, and about \$10,000 at a small air cargo airline. Thus, if all 26 existing air cargo carriers were to institute these security programs, the FAA calculated that the annual costs will be about \$860,000. In addition, the FAA assumed that the annual operating costs of the security programs will increase at the same rate as the projected rate of air cargo growth, which is 5.3 percent.³ On that basis, as shown in Table II-2, the FAA calculated these costs over a 10-year period to total \$10.265 million, which has a present value of \$7.251 million.

Thus, as shown in Table II-2, the FAA estimated that it will cost air cargo operators a total of \$12.330 million, which has a present value of \$9.217 million, to develop and operate a security system under this rule.

TABLE II-2

³ Federal Aviation Administration, FAA Aerospace Forecasts Fiscal Years 2002-2013, Supplemental Table 5 Air Cargo RTMs, March, 2002.

**POTENTIAL COSTS TO ESTABLISH AND TO OPERATE A TSA-APPROVED AIR CARGO
AIRLINE SECURITY SYSTEM⁴**
(in \$Mil)

YEAR	ESTABLISH NEW PROGRAM	OPERATE AN EXISTING PROGRAM	TOTAL COSTS	PRESENT VALUE OF NEW PROGRAM COSTS	PRESENT VALUE OF OPERATING COSTS	PRESENT VALUE OF TOTAL COSTS
2003	\$1.705	\$ 0.000	\$ 1.705	\$1.705	\$0.000	\$1.705
2004	\$0.040	\$ 0.908	\$ 0.948	\$0.037	\$0.849	\$0.886
2005	\$0.040	\$ 0.959	\$ 0.999	\$0.035	\$0.838	\$0.873
2006	\$0.040	\$ 1.013	\$ 1.053	\$0.033	\$0.827	\$0.859
2007	\$0.040	\$ 1.069	\$ 1.109	\$0.031	\$0.816	\$0.846
2008	\$0.040	\$ 1.129	\$ 1.169	\$0.029	\$0.805	\$0.834
2009	\$0.040	\$ 1.193	\$ 1.233	\$0.027	\$0.795	\$0.821
2010	\$0.040	\$ 1.259	\$ 1.299	\$0.025	\$0.784	\$0.809
2011	\$0.040	\$ 1.330	\$ 1.370	\$0.023	\$0.774	\$0.797
2012	\$0.040	\$ 1.404	\$ 1.444	\$0.022	\$0.764	\$0.786
TOTAL	\$2.065	\$10.265	\$12.330	\$1.966	\$7.251	\$9.217

Finally, it needs to be emphasized that these are the FAA's upper bound estimates of the potential air cargo security program costs. These costs will be significantly reduced if many affected air cargo operators decide that they will transport no passengers or that they will transport only their own employees.

II.D. Costs of Phase 2 Flightdeck Security Doors

II.D.1. Costs to Retrofit Phase 2 Flightdeck Security Doors

The costs of retrofitting a Phase 2 door will vary by type of airplane and by an individual airplane's specific interior configuration. The FAA compiled an average cost for the various general airplane models to have these doors retrofitted after evaluating Phase 2 security door costs reported by manufacturers, airlines, and repair stations. These

⁴ Totals may not add due to rounding.

estimates are summarized in Table II-3. For those doors that have received a Supplemental Type Certificate (STC) and are being sold, the cost of the door itself is based largely on experience. For those doors that are still being developed, the FAA estimated a probable cost based on the similarity of those doors with doors that have STCs.⁵

These same data sources also provided estimates of the number of labor hours to complete a flightdeck door retrofit. The FAA used an \$80 per hour total compensation (wages plus fringe benefits plus an adjustment for supervisory time) as the cost of an airplane mechanic.

Finally, these same data sources provided estimates of the number of days the retrofit will keep the airplane out-of-service. In order to proxy the value of the resulting lost net revenues, the FAA employed average daily commercial airplane lease rates of \$24,500 for a large airplane, \$20,500 for a medium airplane, and \$4,500 for a small airplane.⁶ These estimates are based on the FAA assumption that the retrofit will be completed during a dedicated maintenance session. To the extent that these retrofits could be completed during a regularly scheduled maintenance check, these calculated out-of-service net revenue losses are overestimated.⁷

⁵ In addition, the FAA determined that any additional engineering costs to an air cargo carrier for an STC for a specific airplane will be minimal.

⁶ Federal Aviation Administration Office of Aviation Policy and Plans, Economic Values for Evaluation of Federal Aviation Administration Investment and Regulatory Programs, Table 4-5, Summary CY 1996 Average Monthly Lease Rate (\$thousands/month, average weighted by fleet), p.4-11, June 1998. Values updated for inflation since 1996.

⁷ Considering that no air cargo operator had received a phase 2 flightdeck security door as of late October 2002 and none had anticipated receiving these doors before mid-January 2003, the FAA determined that few air cargo airplanes will have a scheduled maintenance check between mid-January 2003 and April 9,

TABLE II-3

AVERAGE COST PER AIRPLANE TO RETROFIT A PHASE 2 DOOR BY TYPE OF AIRPLANE

TYPE OF AIRPLNE	DOOR KIT COST	NUMBERS OF LABOR HOURS TO INSTALL	TOTAL LABOR COST	NUMBER OF DAYS OUT-OF-SERVICE	LOST NET REVENUE PER DAY	TOTAL LOST NET REVENUE	TOTAL COSTS TO RETROFIT
727	\$ 65,000	96	\$ 7,680	2	\$20,500	\$41,000	\$113,680
737	\$ 50,000	96	\$ 7,680	2	\$ 4,500	\$ 9,000	\$ 66,680
747/100/200/300	\$210,000	172	\$13,760	4	\$24,500	\$98,000	\$321,760
747/400	\$ 51,500	96	\$ 7,680	2	\$24,500	\$49,000	\$112,020
757	\$ 50,000	96	\$ 7,680	2	\$20,500	\$41,000	\$ 98,680
767	\$ 50,000	96	\$ 7,680	2	\$20,500	\$41,000	\$ 98,680
DC-10	\$ 50,000	96	\$ 7,680	2	\$24,500	\$49,000	\$106,680
DC-8	\$ 42,000	72	\$ 5,760	2	\$20,500	\$41,000	\$ 88,760
DC-9	\$ 42,000	72	\$ 5,760	1.5	\$ 4,500	\$ 6,750	\$ 54,530
MD-10/11	\$ 45,000	96	\$ 7,680	2	\$24,500	\$49,000	\$101,680
A-300	\$ 50,000	192	\$15,360	4	\$20,500	\$82,000	\$147,360
A-300-600	\$ 50,000	192	\$15,360	4	\$20,500	\$82,000	\$147,360
A-310	\$ 50,000	192	\$15,360	4	\$20,500	\$82,000	\$147,360

Thus, as shown in Table II-4, the FAA calculated that installing Phase 2 doors on the 540 cargo airplanes will cost air cargo operators a total of \$66.5 million in 2003.

TABLE II-4

TOTAL COSTS TO RETROFIT PHASE 2 FLIGHTDECK SECURITY DOORS ON U.S. CARGO AIRPLANES BY AIRPLANE MODEL⁸

TYPE OF AIRPLNE	Numbers of Airplanes	Per Airplane Retrofitting Cost Plus Lost Net Revenue	Total Cost to Retrofit (in \$Mil)
727	172	\$113,680	\$19.553
737	2	\$ 66,680	\$ 0.133
747/100/200/300	45	\$321,760	\$14.435
747/400	7	\$112,020	\$ 0.804
757	34	\$ 98,680	\$ 3.320
767	24	\$ 98,680	\$ 2.346
SUB-TOTAL	284		\$40.588
DC-10	40	\$106,680	\$ 4.212
DC-8	85	\$ 88,760	\$ 7.489
DC-9	86	\$ 54,530	\$ 2.421
MD-10/11	25	\$101,680	\$ 2.537
SUB-TOTAL	193		\$16.659

2003. As a result, any overestimate of the net revenue losses would be minimal.

⁸ Totals may not add due to rounding.

A-300	17	\$147,360	\$ 2.578
A-300-600	25	\$147,360	\$ 3.702
A-310	20	\$147,360	\$ 2.975
SUB-TOTAL	63		\$ 9.255
TOTAL	540		\$66.502

The FAA determined that this final rule will not affect future air cargo airplanes added to the fleet. Future air cargo airplane additions will be new air cargo airplanes and passenger airplanes converted into air cargo airplanes. The FAA believes it is unlikely that any future new air cargo airplanes will be built with a flightdeck door. Thus, this rule will not apply to them. Future converted passenger airplanes, however, will come with a Phase 2 flightdeck security door because they needed to comply with the April 9, 2003, existing passenger airplane door requirement. Clearly, there will be no Phase 2 flightdeck security door retrofitting costs for airplanes that already have the doors.

II.D.2. Phase 2 Flightdeck Security Door Maintenance Costs

Phase 2 flightdeck security doors have electronic systems that are not present in existing flightdeck doors. These systems need to be periodically inspected, maintained, and, occasionally, repaired. The FAA estimated that, on average, 8 additional maintenance labor hours will be annually needed for these tasks. Further, the FAA determined that the average annual materials costs will be minimal. Using the total compensation rate of \$80 an hour for an airplane mechanic and an

annual fleet growth rate of 5.3 percent,⁹ as shown in Table II-5, the FAA calculated that the additional annual maintenance costs (beginning in 2004) will be \$345,000, increasing to \$550,000 in 2013. The total increased maintenance costs between 2004 and 2013 will be about \$4.4 million, which has a present value of about \$3.0 million.

II.D.3. Increased Fuel Consumption from Increased Door Weight

Finally, these Phase 2 flightdeck security doors and associated doorway strengthening materials add weight to the airplane, which increases fuel consumption. The FAA estimated that the retrofitted door will add 120 pounds to a large cargo airplane, 90 pounds to a medium sized cargo airplane, and 75 pounds to a small cargo airplane. Each additional pound increases annual fuel consumption by 12.25 gallons for a large cargo airplane, 19.1 gallons for a medium sized cargo airplane, and 5.75 gallons for a small cargo airplane.¹⁰ Using a price of \$0.80 per gallon and the annual growth rate of 5.3 percent, the FAA calculated, as shown in Table II-5, an annual additional fuel cost of about \$660,000 in 2003, increasing to about \$1.1 million in 2013. These

⁹ Boeing estimates that 70 percent of the future air cargo fleet will be converted passenger airplanes and 30 percent will be new air cargo airplanes. As noted in the text, the FAA determined that all of the converted passenger airplanes and none of the new air cargo airplanes will have Phase 2 flightdeck security doors. Consequently, to the extent that the existing air cargo fleet is retired and replaced by a converted airplane, the FAA overestimated the additional maintenance and fuel consumption attributable to this rule because the flightdeck door was installed under the passenger airplane flightdeck door requirements. The operator would have the option of having the phase 2 flightdeck door removed during the conversion but, as noted, the FAA believes that the expense of removing the door would be greater than the annual maintenance and fuel consumption costs.

¹⁰ Washington Consulting Group, Impact of Weight Changes on Aircraft Fuel Consumption, p.16, March 1994. These values were adjusted for the fewer flight hours experienced by air cargo airplanes relative to scheduled passenger service. The FAA also had input from an airline on these values. The FAA requests comments on these values.

additional fuel costs between 2004 and 2013 will total about \$9.5 million, which has a present value of about \$7.7 million.

TABLE II-5

**ANNUAL COSTS ASSOCIATED WITH RETROFITTED PHASE 2 FLIGHTDECK SECURITY
DOORS IN U.S. CARGO AIRPLANES BY YEAR¹¹**
(In \$Mil)

Year	INCREASED MAINTENANCE COST (2004-2013)	PRESENT VALUE INCREASED MAINTENANCE	INCREASED FUEL COSTS (2003-2013)	PRESENT VALUE INCREASED FUEL COST
2003			\$0.661	\$0.661
2004	\$0.345	\$0.323	\$0.696	\$0.651
2005	\$0.364	\$0.318	\$0.733	\$0.640
2006	\$0.383	\$0.313	\$0.772	\$0.630
2007	\$0.403	\$0.308	\$0.813	\$0.620
2008	\$0.425	\$0.303	\$0.856	\$0.610
2009	\$0.447	\$0.298	\$0.901	\$0.601
2010	\$0.471	\$0.293	\$0.949	\$0.591
2011	\$0.496	\$0.289	\$0.999	\$0.582
2012	\$0.522	\$0.284	\$1.052	\$0.572
2013	\$0.550	\$0.279	\$1.108	\$0.563
TOTAL	\$4.406	\$3.007	\$9.542	\$6.722

II.E. Total Costs of Phase 2 Flightdeck Security Doors in Cargo
Airplanes

Thus, as shown in Table II-6, the FAA estimated that the costs to air cargo operators between 2003 and 2013 of retrofitting Phase 2 security flightdeck doors will be about \$80.450 million, which has a present value of about \$76.225 million. Of particular note is that the biggest expenditure of \$66.5 million will occur in 2003, the first year.

¹¹ There is the possibility that some air cargo carriers with a security program that buy a passenger airplane converted to an air cargo configuration may have the door removed during the conversion in order to save on these annual costs. The FAA believes that this is unlikely to occur due to the initial expense involved in disabling the electronic door systems already installed in the airplane.

TABLE II-6

TOTAL AND PRESENT VALUES IN 2003 OF COSTS TO RETROFIT PHASE 2 SECURITY DOORS IN U.S. CARGO AIRPLANES THAT CURRENTLY HAVE FLIGHTDECK DOORS
(in \$Mil)

COST TO RETROFIT DOORS	INCREASED MAINTENANCE COST (2004-2013)	PRESENT VALUE INCREASED MAINTENANCE	INCREASED FUEL COSTS (2004-2013)	PRESENT VALUE INCREASED FUEL COST	TOTAL COST	PRESENT VALUE TOTAL COST
\$66.499	\$4.406	\$3.007	\$9.542	\$6.722	\$80.447	\$76.228

II.F. Potential Cost Savings from the Final Rule

In conclusion, the FAA determined that if all air cargo operators affected by the final rule choose to develop a TSA-approved security program instead of installing Phase 2 flightdeck security doors, between 2003 and 2013 they will save a total of about \$68.117 million, which has a present value of \$67.011 million.¹² The relatively small difference between the total cost and its present value is that 82.4 percent of the cost savings (\$64.704 million) would occur by April 9, 2003. Finally, it should be noted that to the extent that several air cargo operators have voluntarily developed personnel security programs and will not incur all of the expenses to develop their programs, the cost savings have been underestimated.

Finally, if it would be financially advantageous for an individual operator to retrofit the Phase 2 flightdeck security door, the operator will have that option. Thus, the FAA determined that this rule provides substantial cost savings to the affected air cargo operators.

¹² Compare Table II-2 and Table II-7.

III. BENEFITS

As described in detail in the Preamble, there are several reasons why the security value of a Phase 2 flightdeck door in passenger airplane operations is significantly different from that in air cargo operations. For example, a Phase 2 door in a passenger airplane is a necessity when flying a diverse population, who are largely unknown to the airline. In comparison, air cargo operators transport far fewer riders, the operator knows those riders, and cargo operators have greater discretion in deciding who rides on the airplane. Security procedures, developed under the expertise of the TSA make the reinforced door less valuable and necessary.

On several air cargo models, some exits in the non-flightdeck area are blocked by cargo or airplane modifications. Whereas passengers have multiple exits from the airplane, the only exit for riders in cargo airplanes may be on the other side of the flightdeck door. Without a better security option, the FAA originally concluded that this safety concern was outweighed by the security concern. However, as the enhanced security from a TSA-approved program is now a viable option, the safety of riders in an emergency evacuation takes on a higher priority.

Air cargo operators carry diverse cargo such as animals and dangerous goods, which requires them to carry riders who have specialized tools and equipment that are prohibited on passenger flights. Also, on passenger flights, crewmembers, Federal Air Marshals, and other passengers can intervene to inhibit efforts to penetrate the reinforced doors. On cargo operations, the limited number of riders gives a

terrorist time to defeat the protection offered by the doors. Use of a TSA-approved program should render access to this equipment irrelevant.

The cost of the reinforced doors would be acceptable if doors were the only alternative to prevent air cargo hijackings. However, with the TSA-approved security procedures now available, the air cargo operator needs to select the option that best fits their needs while maintaining the necessary level of security. In other words, the FAA determined that it is more efficient for air cargo operations to spend resources on keeping terrorists off of airplanes rather than relying on a strengthened flight deck door delaying them from breaking into the flightdeck.

IV. REGULATORY FLEXIBILITY ANALYSIS

The Regulatory Flexibility Act of 1980 (RFA) establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation." To achieve that principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA. However, if an agency determines that a proposed or final rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

This action provides equal regulatory relief to all air cargo carriers. Therefore, the FAA certifies that the rule will not have a significant economic impact on a substantial number of small entities.

V. INTERNATIONAL TRADE ASSESSMENT

The Trade Agreement Act of 1979 prohibits Federal agencies from engaging in any standards or related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and where appropriate, that they be the basis for U.S. standards. The FAA assessed the potential effect of this rulemaking and determined that it provides equal regulatory relief to both U.S. (under Part 121) and foreign air cargo carriers (under Part 129). Therefore, the FAA determined that this rule will have a minimal effect on international trade.

VI. UNFUNDED MANDATES ASSESSMENT

The Unfunded Mandates Reform Act of 1995 (the Act) is intended, among other things, to curb the practice of imposing unfunded Federal mandates on State, local, and tribal governments. Title II of the Act requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in a \$100 million or more expenditure (adjusted annually for inflation) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a "significant regulatory action."

This final rule does not contain such a mandate. Therefore, the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply.